

CLAIMS

1. Use of a plant which has been modified to produce increased levels of flavonol glucosides, or an extract thereof containing flavonol glucosides, in the manufacture of a composition for use in reducing hypertension.

2. Use according to claim 1 wherein the plant or plant extract provides a daily dosage of flavonol glucoside equivalent to from about 0.1 to about 20 mg of flavonol aglycon per kg of body weight.

3. Use according to claim 1 or 2 wherein the plant is a vegetable or fruit.

4. Use according to any of claims 1 to 3 wherein the plant is selected from a tomato, onion, apple, blueberry, broccoli, tea and buckwheat.

5. Use according to any of claims 1 to 4 wherein the plant has been genetically modified to produce increased levels of flavonol glucosides.

6. Use according to claim 5 wherein the genetically modified plant comprises two or more heterologous polynucleotides, each encoding a different transcription factor for flavonoid biosynthesis, stably incorporated into its genome such that the plant's ability to produce flavonol glucosides is increased.

7. Use according to claim 6 wherein the genetically modified plant comprises a heterologous polynucleotide sequence encoding the maize C1 transcription factor and a heterologous polynucleotide sequence encoding the maize Lc transcription factor.

8. Use according to claim 5 wherein the genetically modified plant comprises a heterologous polynucleotide encoding chalcone isomerase (CHI).

9. Use according to claim 5 wherein the genetically modified plant expresses chalcone synthase and flavanol synthase simultaneously and optionally expresses chalcone isomerase and/or flavonone-3-hydroxylase.

5 10. Use according to any of the preceding claims wherein the flavanol glucoside is a quercetin glucoside.

11. Use according to claim 10 wherein the quercetin glucoside is isoquercitrin.

10 12. Use according to any one of the preceding claims wherein the genetically modified vegetable or fruit is in the form of a vegetable or fruit extract.

13. Use according to any one of the preceding claims wherein the plant or plant extract is in the form of a paste or other processed form.

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14. A food product comprising a plant which has been modified to produce increased levels of flavonol glucosides, or an extract thereof containing flavonol glucosides.

20 15. A health supplement comprising a plant which has been modified to produce increased levels of flavonol glucosides, or an extract thereof containing flavonol glucosides.

25 16. A food product according to claim 14 or a health supplement according to claim 15 wherein the plant has been genetically modified to produce increased levels of flavonol glucosides.

30 17. A method for the treatment of hypertension in a mammal which method comprises administering to the mammal an effective amount of a plant which has been modified to produce increased levels of flavonol glucosides, or an extract thereof containing flavonol glucosides.